Province of
British Columbia

Ministry of
Agriculture
and Fisheries

Honourable John L. Savage, Minister

ANNUAL REPORT 1988-89

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British Columbia Cataloguing in Publication Data

British Columbia. Ministry of Agriculture and Fisheries.
Annual report. - 1985; 1986/87-

Continues: British Columbia. Ministry of Agriculture and Food. Annual report. ISSN 0710-8664
Report year varies: 1985, Dec. 31; 1986/87-March 31. Report for 1986/87 covers 15 month period Jan. 1, 1986 to March 31, 1987.
ISSN 0835-4871 = Annual report - Ministry of Agriculture and Fisheries (Victoria)

1. British Columbia. Ministry of Agriculture and Fisheries - Periodicals. 2. Agriculture - British Columbia - Periodicals. 3. Agriculture and state - British Columbia - Periodicals 4. Fisheries - British Columbia - Periodicals. 5. Fishery policy - British Columbia - Periodicals.

S141.B76 354.7110682'3
Rev. March 1989

Annual Report 1988-89

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90-05486/1

Mission Statement

Honourable John L. Savage, Minister

The Ministry of Agriculture and Fisheries will encourage sustainable growth and development of industries involved in producing, processing, distributing, and marketing agricultural, fish and food products in British Columbia to meet demand in domestic and export markets.

Province of British Columbia

Ministry of Agriculture and Fisheries

Victoria
British Columbia
V8W 2Z7

To the Honourable
David Lam, C.M., LL.D.
Lieutenant-Governor of the
Province of British Columbia

May It Please Your Honour:

I have the pleasure of submitting for your consideration the Annual Report of the Ministry of Agriculture and Fisheries for the fiscal year ending March 31, 1989.

This fiscal year was a year of change for the agricultural industry. It was the year that we faced the reality of the coming of the Free Trade Agreement. Ministry staff worked closely with individual clients and producer groups to develop agricultural strategies to respond to emerging issues. The ministry's programs strive to empower the agricultural and fisheries industry to deal with situations effectively and efficiently.

Recognizing that change will be constant and our response must be based on sound operating principles, the ministry has developed a strategic plan. This plan embodies the three priorities identified by the government—economic development, education and environment. This plan assesses our business environment and sets out the manner in which our ministry will be conducting its business.

This strategic plan also complements our mission statement. The plan places great emphasis on the sustainability of agriculture through increasing financial stability and competitiveness, enhancing product quality, continuing our development and extension programs, and encouraging enlightened resource management.

The agriculture and fisheries industry is becoming increasingly international and this ministry is committed to improving trading conditions for natural products. A level playing field even within Canada is essential if we are to be competitive.

During this fiscal year the ministry developed the Agriculture Protection Act to protect farmers engaged in responsible agriculture practices from civil lawsuits, and the Farming and Fishing Industries Development Act which establishes a levy system to allow industry to raise funds for promotion.

This fiscal year the ministry conducted a study of public awareness and perceptions of the agriculture and fisheries industry. Preliminary information from this study indicates that the environment is a major concern for most citizens. I am pleased to report that this ministry has programs which support environmentally sustainable agriculture and fisheries practices, and we will continue to develop and support such programs.

The industry has much to be proud of. We've come a long way. I am encouraged by the progress we are making and I look forward to continued success.

John L. Savage

John L. Savage
Minister of Agriculture and Fisheries

Province of British Columbia

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Victoria
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To the Honourable John Savage, Minister of Agriculture and Fisheries

Sir:

I am pleased to present the annual report of the British Columbia Ministry of Agriculture and Fisheries, which summarizes the activities of your staff for the fiscal year ending March 31, 1989.

The annual report is organized to reflect this ministry's key priorities—financial stability, markets and competition, quality, development and extension, and resource conservation and management.

There were many changes this fiscal year; indications were that the rate of change would possibly escalate as we adjust to new market conditions. Our programs were developed to facilitate change and to equip industry to deal with change.

Three major programs, National Tripartite Stabilization, Farm Income Insurance and Crop Insurance are employed by this ministry to reduce the financial risk associated with agricultural production and marketing.

The $28 million Grape and Wine Adjustment Assistance Program was introduced to help producers adjust to new conditions under the Free Trade Agreement. This Federal/Provincial program allows grape growers and wine producers in the Okanagan a six-year period of adjustment.

Soft fruits enjoyed an excellent production year, with raspberries setting a production record of 42.5 million pounds. We also produced 22 million pounds of strawberries, 27 million pounds of cranberries and 16 million pounds of blueberries. Unfortunately shipments of U.S strawberries and raspberries entered the market, driving local prices downward. An ad hoc program, Red Delicious Special Payment, was introduced to offset severely depressed returns to apple growers.

Crops grown under glass or in other protected environments are among the fastest expanding crops in our industry. Greenhouse vegetable production, floriculture and nursery crops are expanding at the rates of 20-25 percent annually. Market returns have continued strong in these areas.

This ministry continues to support integrated pest management (IPM) initiatives and is pleased to report that over 80 percent of crops grown in protected environments are now produced without the use of pesticides. As well, the tree fruits industry has established itself as a leader in IPM, and is making remarkable progress in the control of the codling moth population.

British Columbia's agricultural diversity is unrivaled in Canada. We now produce over 130 different commodities, among them kiwifruit and ginseng.

Other specialty crops being tested include specialty apples, Asian pears, herbs, mini-vegetables and organic foods. While evaluations, further testing and research are necessary for these and other crops, assessing our markets and providing product to meet those markets will increase in importance as trade between nations broadens.

Aquaculture is a young industry for British Columbia and this ministry is aiding its development through technology transfer workshops, a broodstock evaluation program, the establishment of resource centres, site planning studies and the development of aquaculture licensing regulations. In 1988, the

industry became self-sufficient in egg supply.

The aquaculture sector continues to grow, with the 1988 harvest valued at over $42 million, triple that of the previous year. The ministry helped organize Aquaculture International, a major trade show and conference.

Adverse weather conditions in various parts of the province played havoc with many crops. Record low temperatures in February damaged soft fruit acreages and forage crops in the lower mainland, fruit trees in the Okanagan and caused high calf mortality for beef producers.

Drought conditions in the Cariboo affected feed and water supplies for beef producers in that region, and the ministry once again offered its feed exchange listings to put buyers in touch with sellers.

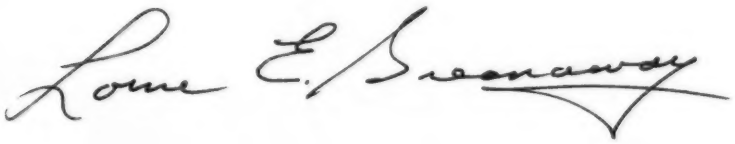
To help offset the effect of subsidies in a neighbouring province this ministry introduced the British Columbia Slaughter Cattle Recovery Program. Fifty-eight producers received $2.5 million on approximately 36,000 head of slaughter cattle.

One of this ministry's continuing involvements, the Agri-food Regional Development Subsidiary Agreement (ARDSA), is affecting many facets of agriculture and fisheries in this province. Our challenge is to become more efficient, increase production, improve soil and water management, grow new products and create new markets, and to equip future generations with new methods to make them more competitive.

The five-year, $40 million Federal/Provincial ARDSA agreement is striving to meet those challenges. To the close of this fiscal year $29.5 million have been committed to 178 approved projects. It is estimated that these projects will generate a further $37.3 million in private sector investment.

Understanding the market place is increasingly important and this ministry launched a comprehensive study of consumer perceptions of and attitudes towards agriculture and fisheries. The findings, which will be released later this year, will be useful in positioning the industry and government in the global marketplace.

In summary, the ministry made great progress towards meeting the goals of our strategic plan. And we will continue to concentrate our efforts on meeting the challenges of the 1990s.



Dr. Lorne E. Greenaway
Deputy Minister

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Province of
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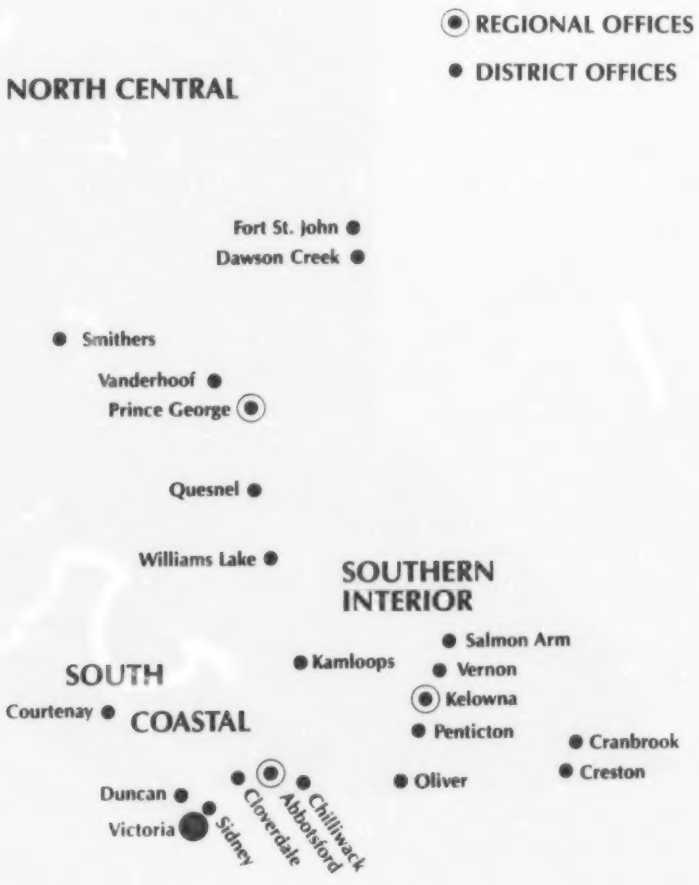
AGRICULTURAL REGIONS



Financial Stability

The financial stability of the agricultural industry is constantly being challenged, frequently by forces beyond the producers' control.

Financial programs of this ministry are designed to reduce farm losses and income fluctuations caused by natural hazards and unpredictable market conditions, and to stimulate industry development. Other programs provide assistance in adjusting to new and changing markets.

Agri-food Regional Development Subsidiary Agreement

This was the fourth year of the five year Agri-Food Regional Development Subsidiary Agreement (ARDSA), a jointly funded $40 million Ministry of Agriculture and Fisheries and Agriculture Canada program. ARDSA objectives are to stimulate growth and development, increase employment, enhance viability and competitiveness of agricultural production and food processing, and conserve and develop agriculture's basic resources—land and water.

Since the signing of the current agreement in 1985, to the close of this fiscal year, $29.5 million have been committed to 178 approved projects. It is anticipated these projects will generate a further $37.3 million private sector investment. An additional $600,000 have been committed to unilaterally funded and delivered provincial and federal projects.

Approved projects are classified under three main programs: productivity enhancement, resource development and commodity development.

Productivity enhancement projects include crop variety and livestock trials, new systems, equipment and techniques, technology demonstration, agri-business education and marketing projects.

The resource development area includes irrigation, drainage, water supply systems, and soil conservation and improvement projects. Commodity development encompasses production improvement, new and expanded market facilities such as packaging, grading, storage and processing, and new or improved facilities.

Many of the projects tend to be multi-purpose in nature. For example, a large drainage and irrigation project may support the dairy industry through improved fodder production but also provide a basis for horticulture production expansion.

Grape and Wine Sector Assistance

In early 1989 the provincial and federal governments signed the Canada/British Columbia Grape and Wine Sector Adjustment Assistance Initiative to assist the grape and wine industry in adjusting to changes caused by the implementation of the Free Trade Agreement and the GATT panel decision. This six-year, $28 million program is designed to compensate B.C. grape growers for loss of production assets, assist B.C. wineries in purchasing grapes at 1987 marketing board prices, and assist with the marketing and promotion of premium B.C. wines.

The majority of the $2.5 million expended in this program this fiscal year was in deficiency payments to wineries.

Agricultural Land Development Assistance

The Agricultural Land Development Assistance (ALDA) program provides loans of up to $50,000 per applicant for primary land development, irrigation and farmland drainage. During this fiscal year 118 contracts valued at $1.6 million were issued. Additionally, contracts carried from the previous fiscal year and completed this fiscal year increased loan value to $1.9 million.

Guaranteed Loan Program

The Guaranteed Loan Program assists B.C. farmers who have insufficient loan security but otherwise viable farm operations, in obtaining credit. This fiscal year 12 loan guarantees totalling $1.7 million were issued. As of March 31, 1989 there were 40 guarantees outstanding totalling $4.4 million. Three loan guarantees valued at $2.5 million were placed under the Financial Administration Act, and at year end one guarantee was still outstanding.

Demand for this program has decreased since the early 1980s as a result of weakening demand for agricultural credit.

Grower Loan Program

Implemented in 1986, the Grower Loan Program encourages the production of higher quality produce by supplementing federal advance payments to growers through their grower association, B.C. Tree Fruits. Interest reimbursement in 1988-89 totalled $405,107.

Reducing The Risk

Income stability is a major concern to B.C.'s farmers. Farm Income Insurance, Crop Insurance and National Tripartite Stabilization, three perennial programs administered by the Farm Income and Crop Insurance Branch, are designed to reduce the financial risk associated with production and marketing of selected agricultural commodities.

Farm Income Insurance (FII), a voluntary participation program introduced in 1974, reduces losses caused by detrimental price fluctuations such as low market return and rapidly escalating input costs. In 1988 FII had nine commodity plans encompassing over 20 commodities and 3,843 participants.

Exceptionally low market returns necessitated a $15.6 million gross indemnity payment for Red Delicious apples. A 15 percent decrease in market returns coupled with a seven percent increase in production costs created the need for a $7.5 million FII gross indemnity payout to swine producers. California strawberries flooded the B.C. market place, severely depressing returns for local producers, and a FII payout was necessary to stabilize producer incomes. Although market returns for finishing beef were fairly constant, an 18 percent increase in production costs necessitated a payout to that agricultural sector.

The Crop Insurance Program stabilizes farm income by minimizing the economic impact of crop losses from natural perils such as drought, hail, flood and frost. The province delivers the program and covers administration costs, while the producers and federal government equally share the cost of premiums.

Since introduction of the Crop Insurance Program to tree fruit farmers in 1967, the program has expanded to seven plans with 27 insurable commodities.

For the 1988 crop year 2,358 farmers insured crops for a total coverage of $90.2 million. The federal government and farmers shared the $9.89 million in premiums.

Premiums exceeded indemnities in 1988 for only the second time since 1981 (1987 was the first time), and fund performance is being addressed by the Crop Insurance Program in an attempt to bring premium rates to where revenues meet indemnities paid, and to where the accumulated debt now financed by advances from the Crop Insurance Stabilization Account can be repaid.

Hail and freezing rain affecting the fruit plan were the primary causes of loss in 1988.

Participation in the Crop Insurance Program is voluntary and varies greatly among plans and therefore regions. The tree fruit and grape sectors have the highest participation rates and marketing initiatives are being implemented to increase participation in the other plans.

The province entered into a National Tripartite Price Stabilization agreement for apples in 1987, but because the 1988 crop is still being sold, no indemnity rates are available for that year. In 1987 the plan had 1,623 participants who each received an interim payment of $1.59 per kilogram and a final payment of $1.96 per kilogram for a gross payment of $6.9 million. The $4.1 million premium payments were insufficient to cover the total indemnities and the federal government lent the fund the shortfall.

To further offset depressed returns on the 1987 Red Delicious crop, an ad hoc program—Red Delicious Special Payment—paid 1,400 growers $3.3 million, or one cent per kilogram. The average payment to each grower was $2,346.

Tripartite Stabilization agreements were also signed for Feeder Calves (effective Jan.1, 1989), Feeder and Slaughter Cattle (effective Oct.1, 1989), Lambs (effective Mar.1, 1989) and Slaughter Hogs (retroactive July 1, 1986).

Reducing the Impact

The ministry introduced the British Columbia Slaughter Cattle Recovery Program to offset the effect of Alberta subsidies on B.C.'s cattle industry. The program paid $80 per head for eligible cattle fed and slaughtered in British Columbia during the last two quarters of 1988 and the first quarter of 1989. Fifty-eight producers in the program received $2.5 million on approximately 36,000 head of slaughter cattle. A program evaluation has been commissioned to determine the impact of the program on the cattle industry.

A short term program was also initiated to assist hog producers negatively affected by a packing plant labour dispute in the fall of 1988. Two hundred and one producers received an average of $1,252 each, for a total payout of $251,688.

B.C. Feed Grain Market Development Program

This program encouraged the diversion of Peace River grain from its traditional export route to a more reliable domestic market in the southern part of the province. Producers of B.C. feed grain were eligible for a payment of $15 per tonne for grain sold into the domestic market, and the livestock producer was eligible for a payment of $11 per tonne for B.C. domestic grain fed to eligible livestock.

At fiscal year end an estimated 125,880 tonnes of grain eligible for $3.5 million in incentive payments had been shipped into southern British Columbia. This compared to 10,000 tonnes prior to the program.

During the 1988 crop year the program had 1,020 registrants, down from 1,326 the previous year.

Competitiveness

Remaining competitive in today's market requires staying in touch with domestic and foreign consumers, determining trends, identifying niche markets, applying research technology and producing quality goods at prices fair to the producer and consumer.

Our Main Objectives

Domestic marketing programs of this ministry assist producers and food processors in improving their marketing and management skills by compiling, publishing and analysing market data and by making additional marketing information available.

Export market development programs assist food producers and processors by increasing their marketing capabilities, and by locating international markets for agricultural products, technology and expertise.

Stimulating the Processing Sector

The Food Industry Development Program provided financial incentives through grants of up to $50,000 to encourage the development of new or improved food products, expansion of domestic and export markets and commercialization of new or improved processing technology.

It is estimated that $3.1 million in private sector investment has been generated by $601,494 in financial support to 43 projects which will create 272 person years of employment and generate new sales of $8.8 million.

Projects initiated included further development of value-added tofu products, the development of a consumer friendly line of frozen shellfish products, the development of a line of frozen food products for the children's market and a pilot project for a Quality Assurance Monitoring System for farmed salmon.

Aquaculture International

The ministry co-sponsored Aquaculture International '88, Canada's largest international aquaculture congress and trade show. Over 1000 delegates and nearly 100 local, national and international experts discussed the industry's successes, problems and future.

The trade show featured over 200 aquaculture and service companies from around the world and attracted over 4,500 visitors.

In Good Taste

A study conducted by this ministry in cooperation with B.C. Chefs' Association identified a number of market niches for B.C. food products, and recommended that primary producers and processors concentrate product development and marketing initiative on gourmet products.

Recent statistics indicate that by 1990 50 percent of meals will be eaten away from home and an additional 30 percent will be purchased on the way home from work. This suggests considerable growth potential for the food service sector.

Simplifying the Process

The Ministry sponsored a seminar, Selling to the British Columbia Cruise Industry, and exposed 130 B.C. business representatives to the size, scope and competitiveness of the cruise industry. As a result of the seminar, B.C. vendors established contracts varying from $6,000 to $1 million, with major cruise lines for the 1989 Alaska cruise season. Products involved varied from bagels and breads to fresh seafood, vegetables and meat products.

Marketing plans, strategies, trends and ideas on increasing cafeteria sales were presented to 275 food service managers, dietitians and nutritionists at a University of British Columbia continuing education lecture series.

The B.C. Food Task Force, involving the B.C. Purchasing Commission and this ministry, continued to identify areas of joint action in 1988. A primary thrust of this task force is to make large consumers such as the B.C. Ferry Corporation, institutions and correctional facilities more accessible to local suppliers.

Towards More Profitable Production

Crop losses due to weeds exceeded $40 million and costs of control were about $8 million in 1988. To assist local governments in enforcement of the Weed Control Act, the ministry provided $256,934 in grants to local weed control programs. These grants triggered additional expenditures of $631,295 by local governments and the private sector.

An additional $80,000 grant was given to the B.C. Cattlemen's Association to assist with the control of knapweed and toadflax.

In the tree fruit industry, the tentiform leafminer, an insect new to B.C., was found in some Okanagan apple orchards. The ministry is developing measures which would control this potentially devastating pest. Heavy losses of M9 apple rootstock in some nurseries are being investigated for causes and control.

Greenhouse losses from diseases or pests for which there is no approved control can be enormous, as was the case with cucumber powdery mildew which caused crop losses of $1 million. This ministry participated in a variety of experiments to evaluate chemicals for field and greenhouse registration and application.

The little cherry disease eradication program identified and destroyed 101 diseased cherry trees.

A ministry potato blight forecasting program saved growers two to four fungicidal sprays and $98 to $148 per hectare. Spray forecasts are available on a 24 hour ministry recorded message phone.

The ministry conducted a number of tests to evaluate resistance cultivars, soil fumigants and biological control for fusarium yellows in celery, a condition identified on eight farms.

Several surveys and field trials to monitor and control field crop diseases and pests were con-

ducted by ministry staff. The importance of this work is exemplified by the fact that the elimination of a 10 percent loss of canola to rhizoctonia root rot could add about $1 million to the net income of British Columbia farmers.

Extension efforts in floriculture (farm gate value of $45 million) focused on identification and control of tomato spotted wilt virus which affects numerous flower crops, fusarium corm rot of cyclamen, bacterial blight of geranium and pythium root rot. A research project was initiated for rapid detection of bacterial blight, which is critical to the establishment of a geranium certification program.

The annual pear trellis rust survey examined 5,000 junipers and 50,000 pear trees. A new infection area was found on Vancouver Island.

Guiding Commercial Fisheries

In 1988, the commercial fishing and fish processing industry in British Columbia generated a record of nearly $1 billion worth of seafood products.

The Ministry worked with industry representatives to assure conservation of salmon and herring resources after a GATT ruling that British Columbia fish landing regulations were trade restrictions on exports to the United States.

To meet provincial regulatory, social, and economic objectives, the Ministry also actively participated in domestic advisory bodies, such as the Commercial Fish Industry Council (CFIC). And it sought to influence federal policy positions on the Pacific Area Regional Council (PARC), the International North Pacific Fisheries Commission (INPFC), and the Pacific Salmon Commission (PSC).

Improving Forage Production

The ministry conducted a total of 18 applied research projects to develop least-cost control recommendations against 15 noxious weeds in forage crops. In response to a severe epidemic of stripe rust in Fraser Valley orchardgrass stands, the ministry established field trials to evaluate resistant varieties. A demonstration of range renovation for knapweed control has confirmed that an 18-fold increase in forage production is possible by seeding depleted rangeland, spraying with herbicide for knapweed control and fertilizing with nitrogen. Another trial demonstrated that fertilization with sulphur reduced the oxeye daisy by 50 percent.

A native range toadflax-control project demonstrated a 2.5-fold increase in grass production with the application of herbicide. A wipe-on herbicide demonstration for aspen control resulted in 75 per cent control over a two year period.

Protecting Specialty Crops

Root rot of ginseng can cause complete crop failure of this important industry. This ministry's disease prevention program included the distribution of disease control notes, field calls, demonstration projects and meetings.

Aphids, leaf-hoppers, leafrollers, lecanium scale, eastern filbert blight and crown rot were common problems for hazelnut orchardists, who currently have no registered pest control products. This ministry is working with the industry to obtain pesticide registration.

Minimizing Grasshopper Damage

The ministry, through the Grasshopper Control Act, provided $30,000 in grants to five grasshopper control committees—Chimney Creek, Riske Creek, Nicola, Thompson Valley and Princeton. Nicola and Thompson Valley operated major grasshopper control programs.

Quality

Today's consumers, both domestic and export, have learned to expect quality from British Columbia product. Increasing emphasis is being placed by this ministry on making certain that the level of quality is maintained and improved.

Quality at Sea

The ministry initiated two commercial fisheries policy reviews and the resulting recommendations are being examined by ministry executive.

The first review dealt with requirements for issuance and enforcement of licensing for buyers, vendors and processors, including vessel and truck stations, for all seafood. The second concerned the licensing of vessels for processing at sea, particularly for farm raised salmon.

The Fish Health Program provides consultation on fish health problems and a laboratory diagnostic service on a referral basis in cases where an indepth investigation is required. Withdrawal times are being established for antibiotics and methods of screening are being developed to ensure freedom from antibiotic residue in fish products.

Seeking the Best

The Chinook Broodstock Development Program, initiated by the ministry in cooperation with industry and the federal government, will provide information on preferred strains of chinook salmon for future supplies of eggs to the marine finfish industry. Twenty different stocks of chinook salmon are being evaluated on 30 farms.

The Cattle Improvement Project, a system to help individual beef producers identify weaknesses in their production system and correct them for improved profitability, was introduced. Pocket record books were distributed by the ministry, completed by producers and then returned to ministry staff for analysis and preparation of a summary report. This project is similar to the successful Record of Performance program operating in Smithers.

A pilot project to produce virus certified raspberry and blueberry plants was undertaken with a private nursery. It is hoped that this nursery will produce virus certified, disease free, nematode free plants in soil-less plugs to raspberry and blueberry growers in the province. The 1988 Raspberry Certification Program produced 2.8 hectares of certified stock.

Three regional potato tissue culture labs were established under ARDSA to produce disease and virus free planting stock, and a variety of techniques including the use crop rotation and predator insects are contributing to the reduced use of chemicals by B.C. horticulture growers.

In its continuing effort to maintain British Columbia's status as being free of blackleg in canola, the ministry is testing all seed growers' samples submitted for germination testing for blackleg.

An Emphasis on Animal Health

This ministry has placed new emphasis on education to improve producers' health management skills through its Animal Health Branch programs. Programs help increase production, economic viability and marketability of the livestock industry by encouraging disease prevention, good management and nutrition. A laboratory diagnostic service for veterinarians, livestock and poultry owners gives advice on disease treatment, control and prevention. Our concern for disease free production and chemical free food products extends to the testing of exported and imported animals and carcasses.

A new high pressure liquid chromatograph in the Animal Health Centre allows for the addition of vitamin analysis to the animal tissue diagnostic capabilities. This supports our emphasis on health management skills.

Fact sheets, bulletins, seminars and one on one contact are employed to provide the latest information to producers and animal health practitioners.

The B.C. Swine Health Program (BCSHP) provides for independent documentation of the health status of herds producing breeding stock, and this province now has eight enzootic pneumonia-free herds and ten conventional herds enrolled. This program is critical in our move towards reducing our historical reliance on out of province breeding stock.

The Avian Monitoring Laboratory performed 55,000 serological tests including a continued monitoring of Salmonella. The laboratory, under joint ministry-industry effort, extended monitoring services to all other major poultry producing segments, and added several new tests for emerging poultry diseases.

The ability to respond directly and effectively is paramount in disease control. This was most evident in the control of an outbreak of Nocardia Mastitis Epizootic in December of 1987. A mastitis alert recommending the withdrawal of the suspected source, a contaminated dry cow mastitis treatment, was sent to large animal practitioners. The outbreak peaked in May at 16 cases per month and declined to one case per month by September. British Columbia is the only dairy province in Canada which resolved the Nocardia Mastitis problem.

This ministry is assisting with the development of import regulations for the rapidly developing game farming industry. Large numbers of fallow deer are entering B.C. from other parts of Canada, New Zealand, the United Kingdom and USA, and it is important that we encourage the development of the industry but at the same time remain vigilant in preventing the import of disease.

Food Safety

Food safety in the marketplace is of special concern to this ministry, and our animal health centre conducts tests for antibiotic and antibacterial residues in animal tissue on products entering and exiting our province.

British Columbia produce was monitored for pesticide residue, and education programs encourage the judicious use of pesticides.

In January of 1992 all commercial farmers (approximately 4,000) will require a pesticide applicator's licence to purchase and use restricted pesticides. To facilitate this certification, the ministry assisted with the development of a home-study pesticide applicator's course which will be available in the fall of 1989 through the Open Learning Agency.

Brands and Regulatory Services

The Brand Inspection and Regulatory Services program is the ministry's vehicle for providing ownership security within the livestock industry.

This fiscal year 315,183 head of livestock were inspected at public saleyards, slaughterhouses, feedlots and field sales. Fees for brand inspection, brand registration and licensing were increased 50 percent, to reflect 75 percent cost recovery.

Additional activities included livestock theft investigations, road and range patrols, public relations and assistance to other ministries and agencies, including the Ministry of the Environment, RCM Police and the B.C. Cattlemen's Association.

Development and Extension

Rapidly developing technologies are dramatically increasing the productivity of agriculture. The challenge for this ministry is to maintain and enhance communication between technology users and technology developers so that innovations can be employed to the benefit of the agricultural community and ultimately everyone in the province.

Technology Transfer in Fisheries

Algal blooms have in previous years cost the British Columbia aquaculture industry millions of dollars, and this province is now taking a leading role in the identification, management and damage reduction of algal bloom effects.

The Plankton Watch Program, an ongoing program initiated three years ago by this ministry and carried out by aquaculturists, helps identify the development of dangerous algal blooms. This program is now being used as a model by European insurance companies.

Demonstration of Agricultural Technology and Economics (DATE) funding allowed this ministry to bring in Japanese expertise on algal bloom management. The ministry initiated the development of a video to teach farmers how to monitor plankton conditions. No other fish producing province or country has developed this caliber of material to assist its aquaculture industry.

Through the assistance of this ministry, a second resource centre was established on a community college campus. Resource centres are now located in Campbell River and Sechelt.

Technology transfer was further facilitated by co-sponsorship of, and by providing resource personnel to, numerous courses and workshops on nutrition and breeds of salmon, disease prevention and management, and remote setting of oysters.

Additional workshops provided information on new species cultured in B.C., including mussels, clams and Arctic Char.

In our continuing development and extension role, the ministry printed 15 publications on introductory and technical information for prospective and existing aquaculturists. One of these publications, Aquaculture in B.C.: Doing Business, outlined the revised aquaculture licensing structure as suggested by the 1986 Gillespie Inquiry.

A Helping Hand

Locating adequate feed supplies was a serious problem in the Cariboo where inadequate moisture reduced rangeland production. The ministry offered its feed exchange listing which helps put buyers and sellers of forage feed in touch.

Many producers participated in a new ARDSA on-farm water supply program to upgrade wells, dugouts and water delivery systems for livestock producers.

Another new federal-provincial program was developed to assist irrigation districts and municipalities with up to 75 percent of eligible costs to construct capital works projects in drought affected areas.

Additional assistance was provided through the Drought Assistance Program which saw many tonnes of feed moved to the Cariboo from Nechako and the Peace River Region.

Leading with DATE

The Demonstration of Agricultural Technology and Economics (DATE) program is a hands on program which provides funds and supervisory personnel to a variety of practical projects. In 1988-89 DATE funds were allotted to 23 on-going and new projects including the introduction of kiwifruit production, research in integrated pest management for cole crops, a study to increase the marketability of carrots, and development of a harvest aid for vegetables.

One DATE project explored the value of an-

tagonistic plants in the reduction of root lesion nematode in young apple trees. It was proven that the Harmony Marigold and creeping red fescue and red top grasses will effectively control the root lesion nematode in one year. This information is of special interest to orchardists replanting young apple trees and to the growing number of environmentally aware agriculturists who wish to employ integrated pest management. Other projects focused on diseases, quality and marketablity of B.C.'s expanding fresh vegetable industry.

Harvest aid, a mechanical harvester developed by this ministry's soils and engineering branch, was modified to further reduce handling damage during harvest, and was successfully employed in the cauliflower harvest. Cauliflower is one of the most easily damaged vegetables. Harvest aid will be tested on cabbage and other labour intensive crops in 1989.

A total of $126,000 was provided to DATE program projects in 1988-89, with an additional $35,000 injected by the private sector.

With an Eye to the Future

The Ministry's 4-H program focuses on the long-term human resource development of agriculture and rural society. In 1988-9, almost 1000 volunteer leaders gave of their time, energy and expertise to 3,200 members in 275 4-H clubs.

Clubs are active throughout British Columbia, from Terrace to Cranbrook and from Saanich to Fort St. John. Although 4-H is found primarily in rural areas, there are clubs in urban areas too. Club members have wide-ranging opportunities to learn new skills, related not only to agriculture and homemaking, but also outdoor living, photography, travel, participation in local fairs, and many other areas. Most important is the training for life 4-H offers. Members acquire poise, confidence, and good citizenship as they practice parliamentary procedure and speaking in public at meetings, seminars and conferences.

Strutting our Stuff

Agricultural Fairs and Exhibitions are a most valuable forum through which to promote the industry. This fiscal year 58 agricultural fairs and exhibitions received a total of $186,000 in operating grants. A review of the funding formula will see a change in the grant structure and in 1989-90 recipient fairs will be evaluated on the effectiveness of their operation, including their agricultural content. In the future those evaluations will be considered when determining the amount of the grant.

The 1989 Growers' Short Course was the 31st program jointly sponsored by this ministry and the Lower Mainland Horticultural Improvement Association. It attracted approximately 900 growers and industry representatives.

Computers in Agriculture

Much of the work done by the Farm Management Branch is in the area of computers. This ministry has developed and tested a computer crop and livestock planning package to provide farm managers with a procedure for developing a farm business plan. Included in the package are crop plans and summary plans, projected income statements, cash flow and capital sales projections, purchases and new loans.

Microcomputer spreadsheet models were prepared for the establishment of kiwifruit on Vancouver Island and for the machine harvesting of raspberries.

Microcomputer spreadsheet models on corn silage and grass forage production for the lower mainland were updated.

Cooperating to Prosper

The Ministry of Agriculture and Fisheries and Employment and Immigration Canada have entered an agreement to fund jointly a farm management initiative consisting of a farm laboratory link with the University of British Columbia (UBC) and a series of intensive farm management training programs.

The farm laboratory will be linked to UBC to provide data on new technology in farm management and production economics, and will also undertake to develop expert systems software, videos and interactive videos to facilitate the development of farm management skills.

The management training programs include a 10 day course designed to provide farmers with basic farm management decision making skills. Advanced topics will include advanced financial

management, strategies for expansion, downsizing, diversification, specialization or risk management and the use of microcomputers in farm management.

This program is a cooperative effort between this ministry, Employment and Immigration Canada, the University of British Columbia and ARDCORP, the Agricultural Research and Development Corporation of the British Columbia Federation of Agriculture.

This Business of Agriculture

Expanding the "business" of agriculture is one of the challenges being addressed by this ministry as we prepare for the 1990s. The Agri-food Opportunities and Challenges under Free Trade conference attracted 225 participants. Farmers, government advisors, processors and other agribusiness representatives gathered to discuss how free trade could affect the agrifoods sector, the effects of free trade on commodities and the opportunities and challenges of free trade.

Enterprise budgets which provide costs, commodity prices, investment levels and other vital business information are being prepared on all major commodities in the province. These provide extension staff, farmers and agribusiness with valuable current planning data. Twenty-one enterprise budgets were completed in 1988-89.

Ministry-sponsored workshops, newspaper articles, factsheets and training courses for staff were all part of the ministry's efforts to provide up to date tax reform information to farmers.

A 150 cow simulation model was developed to determine the impact of National Tripartite Stabilization on the net income of B.C. cattle producers and the information was introduced during a meeting of Farm Income Insurance (FII) staff and the FII committee of the B.C. Cattlemen's Association.

Planning for Profit

The ministry took a lead role in the four day Planning for Profit courses in the Peace River region. These courses lead participants to focus on all aspects of farm management. The Future-Sim computer program allowed producers to simulate futures marketing and to experience on paper the gains and losses triggered by their management decisions.

Education in the Field

Seminars, field days, short courses, workshops, demonstrations, personal consultations, trial plot tours and newsletters were utilized extensively to provide the latest agricultural developments to clients of this ministry.

There is heavy demand for competent, unbiased advice, especially in new crops, or where rapid technological changes are occurring. One to one extension is an effective means of technology transfer, and provides extension personnel with valuable information on the industry's needs, innovations and opportunities.

Twenty-five individual ranchers benefited from the ministry's efforts to develop customized wintering rations for beef cattle. The program is being expanded with the development of a software package which will allow district agriculturists to provide this valuable service to ranchers in each area. It is hoped this expanded service will be available in 1990.

Orchard renovation is a major issue and orchardists in the southern interior were able to attend a series of workshops on intensive orchard systems which examined production, economics and marketing. Further assistance to growers considering renovating their orchards was provided by a computer template which analyzes production and financial decisions of various apple production systems. Financial assistance for orchard renovation is available through ARDSA.

Growing in Protected Environments

Crops grown in protected environments such as greenhouses, plastic tunnels, and mushroom houses are among the fastest expanding crops in agriculture. A variety of cooperative projects centred on improving production efficiency, enhancing competitiveness and reducing pesticide use through biological pest control.

An electronic Bulletin Board System (BBS), the Ministry of Agriculture and Fisheries Rapid Information Network, was established for greenhouse growers in 1988. The network, which currently operates between 4:30pm and 8:30am, provides production factsheets, computer programs and an electronic messaging system to greenhouse growers. The bulletin board received 35 calls during three months in 1988. DATE funding has been applied for to

allow the service to operate around the clock in 1989-90.

Thirty to forty growers attended an Agassiz Research Station field day which focused on floating row cover technology employed to extend the vegetable harvest season.One farm plot employing this technology marketed its potatoes in early May and June (two weeks ahead of uncovered plots) when new potatoes were commanding premium prices.

Several presentations, workshops and tours provided local greenhouse growers access to the latest information from Canada, the US and Europe.

Dairy Achievements and Challenges

The Dairy Herd Improvement Services milk recording program indicates that milk yields of B.C. cows averaged 8,100 kg per cow in 1988, an increase of 200 kg over 1987. A successful forage cropping year and appropriate management and technology adoption were primarily responsible for this achievement.

Over 600 people were exposed to the latest in dairy production technology at the annual Dairy Producers Short Course. Co-sponsored by this ministry and the South Coastal Dairy Education Association, this two day event attracts international expertise and province-wide producer participation.

The ministry's livestock nutritionist was keenly involved in research aimed at the development of an integrated computer driven feeding system for dairy cattle.

Dairy industry challenges related to milk marketing issues including inadequate quota from the National Milk Supply Management Plan, threats to supply managements by dissident producers and processors, consumer milk purchases in the US, the US challenge of Canada's Dairy Import Control List and consumer anxiety over food safety issues. Key ministry activities were related to supporting the industry and the B.C. Milk Board in negotiating a larger share of the national quota allocation for industrial milk products.

Exploring Agricultural Diversity

Responsibility for the Game Farming Industry was transferred by Cabinet from the Ministry of the Environment to this ministry in July 1988. There are 36 game farming licences issued and they comprise 26 fallow deer, two reindeer and eight bison operations. Approximately 6,000 fallow deer and 2,000 bison are currently being farmed.

The deer farming sector appears to have considerable potential for growth, with the B.C. Deer Farmer's Association projecting a 1989 production base of 7,000 breeding units, 400 market animals and a 1998 production base of 30,000 breeding units and 20,000 market animals.

The game farm industry is in its infancy and major objectives of the department are to develop a Game Farm Commodity Plan, to organize producers into recognized commodity groups, to develop and implement a licencing and regulating system, to initiate studies on market demand and cost/benefit analysis, and to develop a homestudy course for potential game farm participants.

The Game Farm Act has now been forwarded to the Legislature for approval, and once approved, will allow for the development of appropriate regulations.

A disease transmission research trial to aid reindeer farmers will be conducted by the ministry and Northern Lights College in 1989.

Bees and Honey

The 1988 apiculture industry comprised 5,000 beekeepers with 54,000 hives and farm value of apiculture products and pollination services of $4.9 million. This was down 5.3 percent from 1987 mainly because of lower honey prices and a drought-related decline in hive productivity.

An ARDSA program, which provided incentives to bee stock producers in the package bee and queen bee sector, resulted in a 240 percent increase in the value of bee stock production. Bee stock production was valued at $1.2 million in 1988.

Ministry staff inspected 4,400 hives, conducted a major survey for varroa mites and collected and examined 750 bee samples for tracheal mites. Tracheal mites were discovered in 24 apiaries and resulted in the authorized destruction of 525 bee colonies.

The ministry negotiated a policy with the western provinces which ensures that hives moved into this province for overwintering are certified free of disease and pests and are properly located. New technology for indoor overwintering of bees was demonstrated by ministry specialists and resulted in a 30 percent increase in the survival of bees.

Ministry staff assisted with the development of a crop insurance program for beekeepers and the negotiation of a National Tripartite Stabilization agreement for honey.

Expanding Integrated Pest Management

Recognizing that biological pest control minimizes the impact on the environment and is the most economic form of control in the long run, this ministry continues to support integrated pest management (IPM). A $30,000 grant was issued to the International Institute of Biological Control for screening and introduction of biocontrol agents for knapweed, Dalmation toadflax and tansy ragwort. This ministry in cooperation with Ministry of Forests staff made 95 new releases against nine weed species.

Major advances in biocontrol include the reduction of seed-set to about three percent in diffuse knapweed with the introduction of the Sphenoptera root-boring beetles, and two years after introducing two insects against nodding thistle, 95 percent of mature plants and rosettes have been eliminated.

British Columbia now has 615 sites on which 11 different biocontrol agents have been released against 15 noxious weeds.

The Environment

Agricultural production in British Columbia is very diverse; however, a common thread throughout agriculture is our reliance upon the natural resource base inherent in soil and water and its relatively intensive use. And because of this dependence, the agricultural industry has much at stake in the development of sound resource management strategies.

Water Management

The goal of the Water Management Program is to remove water related constraints to crop and animal production by developing and promoting the proper design, installation and operation of drainage, irrigation, livestock watering and soil erosion control systems.

Ministry staff provided reviews and recommendations on 20 water supply projects funded through the ARDSA program, provided evaluation of a number of regional drainage and irrigation projects, served as project managers for the Courtenay Flats drainage and Sumas River dredging projects, and were instrumental in the initiation of the $6 million Matsqui Prairie Drainage and Irrigation Project.

Ministry staff working in concert with the Irrigation Industry Association of British Columbia have developed standards, design manuals and a certification program to provide the irrigation industry with a high and consistent level of service. Thirteen designers have registered for the program, and the objective is to have 75 certified designers within five years.

Tapping The Sun

Providing water to livestock is a challenge faced by many of this province's more remote cattle ranchers. Solar energy has been identified as a low cost portable power source and staff demonstrated the feasibility of this technology at a test trial near Kamloops. Work is continuing in 1989 with further demonstration projects and

the preparation of material for use by ranchers.

Boundary Bay Water Control

Some areas of British Columbia, particularly the lowlands of the south coastal region, are limited in crop production because of excess water. Ministry staff continue to operate the Boundary Bay Water Control Project which demonstrates and evaluates the effect of drainage on crop production. The project demonstrates that overwintering crops unsuited to poorly drained soils grow well once adequate drainage is installed.

Aquaculture Depends On Appropriate Sites

The 1988 aquaculture harvest is estimated at over $42 million, a substantial increase from the 1987 harvest of $13.6 million. This dramatic increase is mainly due to the harvest of market-sized salmon from farms licensed two to three years ago. Continued growth depends on identifying appropriate aquaculture sites.

A biophysical capability analysis to identify areas of high capability for salmon farming on the north and east coasts of Vancouver Island was completed. Participation in the Nootka Central Resources Identification Study and Sechelt Inlets Coastal Strategy ensure industry siting needs will be accommodated with minimum conflict in the planning study areas.

Ministry staff reviewed and commented on over 100 referrals submitted for marina developments, sewage outfalls, subdivision developments and local government by-laws in a continuing effort to protect the aquaculture resource base.

Detailed development plan reviews were completed and Crown Land allocation recommendations were made for 71 new shellfish, 94 new finfish and two new marine plant culture sites. A further 91 responses for Crown Land referrals for Investigation Permits were issued.

Interministry Cooperation

A Protocol Agreement and Joint Policy on Freshwater Aquaculture and Commercial Fisheries between this ministry and the Ministry of Environment confirmed the Ministry of Agriculture and Fisheries' responsibility for licensing freshwater aquaculture and commercial fisheries.

Protecting The Environment

Projects evaluating the impact of fish farms on the environment including an investigation of the effects of copper-based antifoulants, a review of known environmental impacts of freshwater fish farming and an investigation of the effects of salmon farm effluents on phytoplankton were initiated by this ministry.

Soil and Water Strategy

The Soil and Water Strategy for B.C. was prepared as input into negotiating the Canada-British Columbia Soil Conservation Program. In addition, staff negotiated program implementation procedures and a comprehensive work plan with federal officials.

Intensive Land Use Requires Strong Leadership

Our intensive land use program requires leadership in minimizing the impact of intensive agricultural operation on the environment and on neighbouring land users by improving manure and fertilizer management practices, developing alternate waste handling systems and preparing guidelines and regulations on environmentally sound farm practices.

Presentations to a large number of B.C. farm groups alerted producers to waste management issues. Restrictive legislation in Europe emphasizes the need to ensure sound local practices so as to preclude the need for such legislation in B.C.

Ministry staff are working with both the producers and Ministry of the Environment staff to develop acceptable strategies for resolving issues common to both ministries. This joint effort is expected to lead to the development of a new regulation accompanied by Codes of Agricultural Practice pursuant to the Waste Management Act.

Addressing the Driftnet Issue

This ministry has taken a firm stand on the impact of discarded driftnets on North American salmon stocks. The Government of Canada has been urged to take an aggressive approach through diplomatic channels and to draw public attention to the problems associated with illegal driftnet fisheries.

Managing Our Agricultural Land Base

Access to quality forage and range land is of extreme importance to many of British Columbia's cattle producers. A range management review made recommendations for improving the management and administration of the range program in British Columbia.

Two hundred and fifty acres of wetland meadow were improved by the use of the ministry's wetland plough, ditching and reseeding program.

Six-fold increases can be expected from land which previously only produced one-half ton of forage per acre. The Cariboo region of the province contains several thousands of acres which could be similarly developed.

Impact study analysis and briefing materials were prepared on projects including the Cache Creek/Ashcroft Special Waste Disposal Facility, Colony Farm, Delta Harbour Board Lands and Ports Policy, Matsqui Motorsport Complex, Steeples Ranch and Terra Nova.

Groundwork for a program with Prairie Farm Rehabilitation Administration (PFRA) was being established at year end with the development of the Memorandum of Understanding between Agriculture Canada and the British Columbia Ministry of Agriculture and Fisheries. The agreement will define the framework for water development and soil conservation activities to be carried out by PFRA over the next few years.

Agricultural Land Reserve Review

In the fall of 1987, the Regional Ministers of State were asked to evaluate the role of the Agricultural Land Reserve in their regions, and to consider program procedures in the context of regional development needs. The regional reviews have not been completed, but they are expected to offer constructive suggestions for the Agricultural Land Reserve Program.

In addition, the Ministry has begun a comprehensive review of the program. Together with the regional reviews, this initiative will help chart future directions for the program.

Maximizing Our Crown Rangelands

In 1988 this province's Crown rangelands provided grazing for 216,000 cattle. Growth of the beef cattle industry hinges on increased productivity of private and public rangeland.

Ministry staff conducted a two-day seminar on the potential for application of short duration grazing, an approach to managing rangelands for maximum production. Ministry staff also evaluated a number of new grass cultivars for their survival in drought and severe winter conditions. For example, Hycrest crested wheat grass was 30 per cent more productive, by dry matter, than other crested wheatgrasses in the upper grasslands of Chilcotin; Paiute and Kay orchardgrass proved nutritionally superior to intermediate wheat grass both in protein and total digestible nutrients; Triana hard fescue and Sherman big bluegrass proved to be nutritionally superior in fall when quality forage is limited.

Conflicts and Resolutions

Wildlife and agriculture occasionally find themselves in conflict. Such is the case in the Kootenays where depredation of forage crops by elk and deer continued to be a concern. Fencing and controlled hunting have been identified as the only practical methods of control. This ministry's elk and deer damage assessment study was released in 1988 and formed the basis for further investigation. Management strategies are being developed to reduce the conflict between agriculture and wildlife in the East Kootenay region.

When areas traditionally involved in agriculture also become residential areas, the potential for conflict does arise. The ministry continues to work with local governments to ensure that local government bylaws do not unduly restrict or constrain existing agricultural production and growth opportunities. Particular focus was placed on managing intensive agriculture in rural residential areas.

Management Accountability

The efficient and effective delivery of this ministry's programs are dependent on a sound policy framework and the management of affairs according to a business plan.

The redefinition of this ministry's mission statement to reflect changing priorities and to better serve its clients required that changes be made within the ministry's central and support services.

Systems Upgrading

The ministry's reorganization placed renewed emphasis on standardization, integration and communications which would enable the ministry to accomplish its mandate with greater efficiency.

In the Farm Income Insurance area, improvements resulted in significant reduction of manual labour, computer processing time and the waiting time between application and issuance of cheques to producers. This automation improved services to our clients. The Treasury Board Submission for systems development in the Crop Insurance area has been approved and development will commence in the first quarter of 1989-90.

The implementation of the ministry's three year plan to integrate the administration, management and control of all internal procedures and programmes offered by the ministry has begun. An electronic communication network was implemented between Victoria and all field offices of the ministry.

The network was installed in 15 of 25 field offices. At fiscal year end 100 ministry personnel had received their training in ALL-IN-ONE, Electronic Mail and Word-processing. A further 96 training days are planned for fiscal 1989-90.

In Central Accounting an enhanced software program now enables financial services to better control the financial management of ministry programs, to comply with the data exchange requirements of B.C. Government Central Agencies and to carry out multi-year financial data comparisons and analyses.

Eight new micro computers were acquired and nine were updated, enabling extension branch to provide computer demonstrations and training to producers wishing to improve their farm business management and production skills.

Other services of systems branch included:

Introducing a software program to game farming which allowed the development of a data base, licence management and monitoring of the industry to meet legislative requirements;

Accessing data bases to monitor imported fruit and vegetable unloads to prevent agricultural product dumping violations;

Acquisition of a system to facilitate the management of Food Pacific.

Spreading the Word

The Information Services Branch is the communications arm for the ministry, providing information on agriculture and fisheries on an extension level and on a public information level.

Public information and promotion activities included issues management in cooperation with the Public Affairs Bureau of the premier's office, preparation of news releases and feature articles, preparation of speeches for the minister, display management and the preparation of promotional and printed material for Food Pacific '88.

An information package detailing ministry programs, budget, staff, and issues was prepared for each of the eight Minister of State regions. Customized mailing lists for news releases was set up to service the new regions.

On the extension level, information was provided to ministry clients through fact sheets, bulletins, video tapes, technical manuals, news releases and crop production guides.

During the year the distribution of all government publication sales was privatized, but at year end the Gardeners' Guide to Pest Prevention was the only publication being managed in this manner. All other publications were provided free of charge to commercial farmers.

The ministry also introduced a policy of co-publishing with industry many of the technical manuals and crop production guides. This was, however, not successful and at year end the function of providing technical information manuals was returned to the ministry.

The ministry's video tape library which contains 300 educational tapes, processed over 400 video loans to producers, ministry staff, schools and colleges. The most popular tapes were those dealing with farm business management.

New video tapes were developed to serve as a marketing tool for the horse industry, to demonstrate a solar-powered water pump, as a sales tool for swine breeding stock and as instructional tools for Christmas tree production, high density orchard techniques, kiwi production and fallow deer farming. Rapidly developing technology and ever increasing costs were the basis for the closure this year of the audio-visual production unit and video productions will now be handled by the private sector.

Near the close of the fiscal year the Information Services Branch was divided into Extension Systems Branch, dedicated to extension education and Public Affairs Branch, dedicated to public information and promotion.

Regulated Marketing and Legislation

This branch was formed late in the year in order to commit greater resources to marketing boards and to consolidate 35 of the Ministry's 42 Acts.

The key initiative in the legislative area is to consolidate this ministry's 42 Acts into six or seven broader Acts so as to streamline administration, reduce appeal processes, reduce outdated regulatory activity and reflect new policy directions. This fiscal year saw the development of new legislative proposals: to limit legal action against farmers carrying out irritating but approved farm practices; for game farming; for self-funding for industry development; and to allow B.C. producers and processors to identify and provide products to consumers with special food needs and choices, such as organic foods.

The regulated marketing area provides the support services for the British Columbia Marketing Board (Superboard) and serves as the focal point for analyzing regulated marketing issues.

This Branch provided support to the B.C. Milk Board in negotiations with the Canadian Milk Supply Management Committee.

The development of a British Columbia Natural Products Marketing Policy will provide marketing boards and commissions with a clear definition of government policy and will provide the Superboard with a framework to conduct its supervisory role.

A new B.C. Mushroom Marketing Board was appointed, replacing the previous elected Board, to assist with the marketing of this province's multi-million dollar mushroom crop.

Policy Analysis and Coordination

The policy unit produces briefings, issue papers, analysis, and policy coordination for ministry management. During the year ministry staff developed the broad policy implications and impact analysis of British Columbia's entry into National Tripartite Stabilization schemes for beef, hogs, sheep, honey, onions, blueberries and the renewal of the apple agreement.

Supply managed commodities, particularly the dairy sector, required considerable analytical effort in 1988-89. British Columbia's announced intention to withdraw from the National Milk Marketing Plan necessitated a costs/benefits estimate of various options, should a withdrawal actually occur.

Staff also undertook analysis of grain transportation options, represented the province on national committees dealing with agriculture transportation, agriculture policy review, income stabilization in the Canadian grain industry

and numerous other inter-ministry working groups. This activity is directed at producing major changes in the way agriculture policies are delivered in Canada.

To support the ministry's improved client service, policy development was decentralized to branches responsible for program delivery. The analytical functions of estimating policy impacts, costs and benefits remained with the Policy Analysis and Coordination branch.

Glossary

ALDA—Agricultural Land Development Assistance.
A Ministry of Agriculture and Fisheries program which provides loans of up to $50,000 per applicant for primary land development and for irrigation and farmland drainage.

ALR—Agricultural Land Reserve.
The ALR was established to protect land suitable for food production.

ARDCORP—Agricultural Research and Development Corporation.
ARDCORP, which has a primary mandate to find solutions for on-farm problems through practical research and educational programs, is a wholly owned subsidiary of the B.C. Federation of Agriculture.

ARDSA—Agri-food Regional Subsidiary Agreement
ARDSA, a five-year, $40 million program funded by the B.C. Ministry of Agriculture and Fisheries and Agriculture Canada, provides funds to projects which enhance the viability of agricultural production and processing.

BCFA—British Columbia Federation of Agriculture.
BCFA is the official representative of the province's commercial agricultural industry. It has 9,000 members and is dedicated to the improvement of the economic viability of agriculture.

DATE—Demonstration of Agricultural Technology and Economics.
A Ministry of Agriculture and Fisheries program which provides funding for ministry supervised projects which demonstrate advanced and new technologies.

Crop Insurance Program.
This Federal/Provincial program stabilizes farm income by minimizing economic impact caused by natural perils. Participation in the program is voluntary.

FII—Farm Income Insurance.
The ministry's FII program seeks to stabilize farm income by reducing losses caused by detrimental price fluctuations. Participation is voluntary.

GATT—General Agreement on Tariffs and Trade.
GATT is a multilateral treaty which contains the rules for international trade.

IPM—Integrated Pest Management.
IPM is a multifaceted approach to pest control which seeks to reduce reliance on chemicals.

NTS—National Tripartite Stabilization.
NTS plans were established to stabilize returns to producers during periods of low market prices. Participation is voluntary and premiums are shared by the producer and the federal and provincial governments.

PFRA—Prairie Farm Rehabilitation Administration.
PFRA is a branch of Agriculture Canada which provides technical, financial and material assistance on soil and water conservation and development initiatives.

Statistical Tables

Area of Farms - British Columbia and Canada

A. Total Area of Farms ('000 ha)

Year	British Columbia	Canada	B.C. as Percent of Canada
1976	2,449.5	68,428.5	3.6
1981	2,178.6	65,890.4	3.3
1986	2,411.1	63,739.8	3.8

B. Total Area of Improved Farmland ('000 ha)

Year	British Columbia	Canada	B.C. as Percent of Canada
1976	773.5	44,227.6	1.7
1981	946.3	46,122.6	2.0
1986	900.3	46,011.0	2.0

Note: Total area of a census farm is made up of the areas of crop land, summerfallow, improved pasture, other improved land, unimproved land and woodland on farms.

Source: Statistics Canada, 1976, 1981 and 1986 Census of Agriculture.

Agri-Food Sector Contribution of B.C. Goods Production – Gross Domestic Product

	1979	1980	1981	1982	1983	1984	1985	1986	1987
Agri-Food	1,323	1,328	1,363	1,406	1,399	1,399	1,635	2,019	2,116
All Goods	13,242	13,389	13,673	11,966	13,024	13,362	13,839	13,905	15,556
Percent	9.99	9.92	9.97	11.75	10.74	10.47	11.81	14.52	13.60

Notes:

(1) This is GDP at factor cost. "GDP at factor cost" measures the total earnings from production within B.C. at market prices less indirect taxes plus subsidies.
(2) Units are millions of 1981 dollars.

Source: B.C. Economic Accounts, Ministry of Finance and Corporate Relations

Farm Cash Receipts - B.C. ($'000)

	1983	1984	1985	1986	1987	1988
Wheat	18,696	20,[illegible]	15,658	9,841	9,393	9,624
Wheat, CWB paym't	1,197	2,058	3,063	1,348	0	979
Oats	1,947	1,811	1,175	884	1,126	2,704
Oats, CWB paym't	85	123	92	17	0	212
Barley	14,428	9,027	8,519	7,331	6,697	5,946
Barley, CWB paym't	1,550	303	2,120	349	45	46
Deferments	-5,041	-5,562	-2,910	-3,615	-2,923	-5,198
Liquidations	0	5,041	5,562	2,910	3,615	2,923
Rye	480	728	187	72	131	360
Canola	12,417	12,514	10,838	5,291	7,411	8,091
Potatoes	18,271	21,809	22,546	23,920	24,386	21,771
Vegetables	58,248	64,305	66,323	76,500	75,119	71,001
Apples	27,916	28,400	28,321	35,276	31,721	32,377
Other tree fruits	10,796	13,521	18,205	12,920	14,755	13,311
Strawberries	11,444	7,412	7,077	7,319	12,055	10,369
Other berries&grapes	42,244	40,321	53,988	58,143	67,673	71,193
Floriculture & nursery	43,916	51,948	60,295	71,214	72,796	98,102
Forage & grass seed	2,272	3,292	3,476	6,516	6,193	15,571
Hay & clover	678	1,521	1,682	660	1,056	5,296
Forest products	16,302	16,426	13,461	14,854	15,051	15,311
Misc. crops	2,222	2,366	2,558	2,655	2,770	3,039
Totals crops	280,068	298,002	322,236	334,405	349,070	383,028
Cattle	117,363	134,347	139,371	134,183	138,015	138,357
Calves	28,058	35,090	33,418	47,199	55,151	54,394
Hogs	45,829	47,521	47,606	54,276	49,077	44,166
Sheep	156	175	181	86	129	87
Lambs	1,275	1,546	1,769	1,738	2,183	2,362
Dairy Products	210,250	221,303	228,153	231,737	231,263	237,361
Hens & Chickens	62,999	72,164	75,019	86,179	94,677	99,962
Turkeys	14,416	15,569	16,640	19,042	20,153	22,218
Eggs	63,444	65,931	61,651	60,221	59,607	62,920
Wool	117	144	121	102	110	132
Honey	5,019	5,963	5,575	4,602	4,086	3,505
Furs	7,286	7,498	7,154	3,522	11,396	8,628
Misc. livestock	11,124	12,146	12,333	12,857	13,318	13,482
Total livestock	567,336	619,397	628,991	655,744	679,163	687,574
Crop Insurance pmt	8,154	11,041	14,310	15,455	10,084	8,143
WGSA payments	0	1,510	3,374	5,360	8,087	3,822
ASA - Price stabiliz	1,258	8,362	4,275	1,243	4,233	929
ASA - Tripartite plans	0	0	0	0	0	2,976
Prov. stab. progs.	57,901	57,735	44,384	44,054	14,113	43,670
Dairy subsidy	143	19	9,894	10,227	10,423	10,539
Other payments	15	28	3,986	8,324	5,559	12,711
Total payments	67,471	78,695	80,223	84,663	52,499	82,790
TOTAL RECEIPTS	914,875	996,094	1,031,450	1,074,812	1,080,734	1,153,392

Source: Statistics Canada, Farm Income & Prices Section

Farm Operating Expenses and Depreciation Charges - B.C. ($'000)

	1983	1984	1985	1986	1987	1988
Property taxes	11,905	10,540	10,184	11,025	11,678	12,448
Cash rent	18,630	18,095	19,095	19,952	20,586	20,609
Share rent	3,266	3,194	3,207	3,188	2,456	2,300
Cash wages	140,268	154,103	167,064	178,250	186,209	197,273
Room & board	2,065	1,859	1,854	2,315	2,430	2,612
Interest	126,912	129,524	120,830	119,209	109,010	111,550
Building repairs	13,126	14,098	14,813	16,504	18,387	19,574
Fence repairs	3,839	3,877	3,939	4,006	3,991	4,191
Electricity	14,108	16,045	17,861	18,156	19,566	20,660
Telephone	5,217	5,405	5,459	5,550	5,649	5,973
Heating fuel	8,657	9,173	13,039	10,386	10,316	10,431
Fuel	51,255	51,488	51,628	41,355	40,744	39,748
Machinery repairs	50,296	48,787	51,256	51,793	54,248	52,604
Fertilizer	26,395	29,179	34,700	33,400	33,279	32,226
Lime	1,395	1,448	1,829	2,007	2,034	1,832
Pesticides	11,568	13,185	14,606	13,690	12,766	12,000
Commercial seed	13,719	14,209	15,477	17,264	18,762	19,029
Irrigation	2,112	2,112	2,129	2,219	2,501	2,501
Twine, wire & containers	8,102	10,077	11,195	9,661	9,348	11,328
Crop & hail insurance	2,464	3,163	4,178	4,584	5,189	5,139
Commercial feed	172,666	201,306	190,423	185,000	159,317	175,124
Livestock purchases	12,099	9,939	7,043	8,963	12,485	13,169
A.I. fees & veterinary	12,566	13,377	13,374	14,030	14,173	15,181
Business insurance	3,626	3,535	3,454	3,873	4,265	4,579
Custom work	12,675	13,537	6,164	6,176	5,602	5,546
Stabilization premiums	30,223	31,296	23,833	22,795	12,036	27,134
Other expenses	30,366	32,502	32,345	32,210	31,081	32,990
Gross operating expenses	789,520	845,053	840,979	837,471	808,108	857,751
Interest rebates	6,872	10,981	5,215	6,741	5,417	636
Fuel rebates	426	443	748	1,287	856	1,010
Feed rebates	0	0	0	0	419	1,416
Total net operating exp.	782,222	833,629	835,016	829,443	801,416	854,689
Depreciation on buildings	34,340	32,445	30,001	27,450	24,321	23,956
Depreciation on machinery	70,575	70,424	69,810	70,579	68,547	66,370
Total depreciation	104,915	102,869	99,811	98,029	92,868	90,326
Gross expenses	894,435	947,922	940,790	935,500	900,976	948,077
Total rebates	7,298	11,424	5,963	8,028	6,692	3,062
Total net expenses	887,137	936,498	934,827	927,472	894,284	945,015

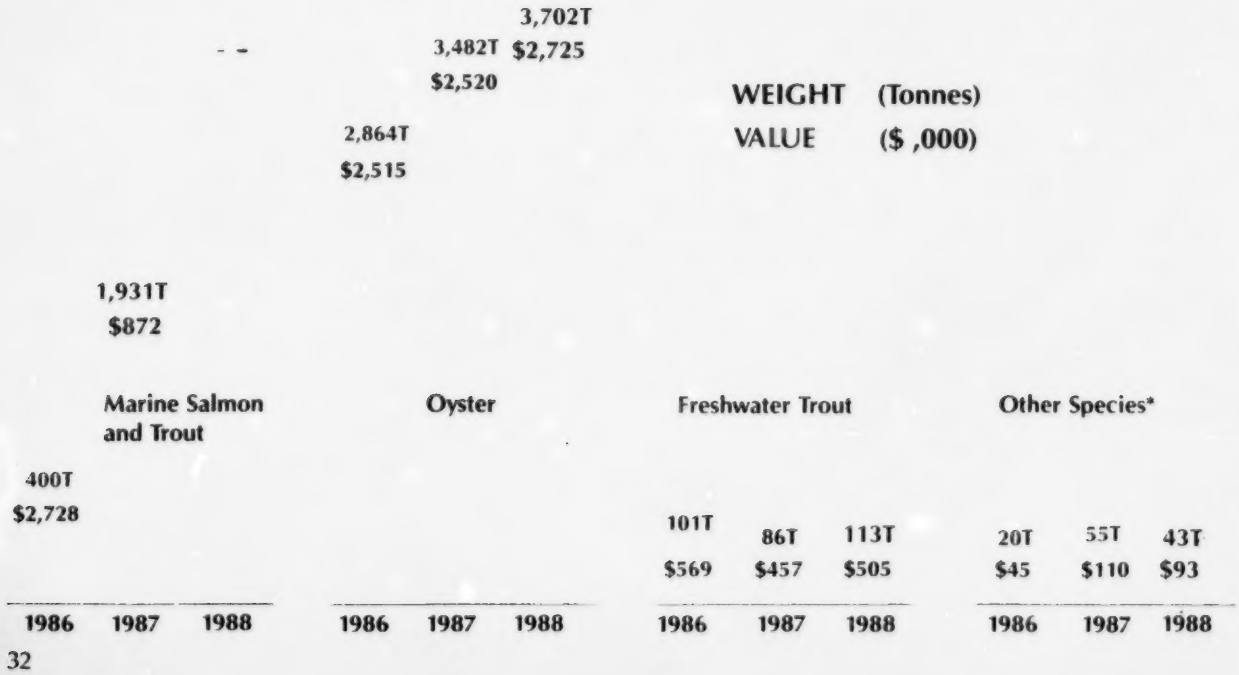
Source: Statistics Canada, Farm Income and Prices Section

Net Farm Income - B.C. ($'000)

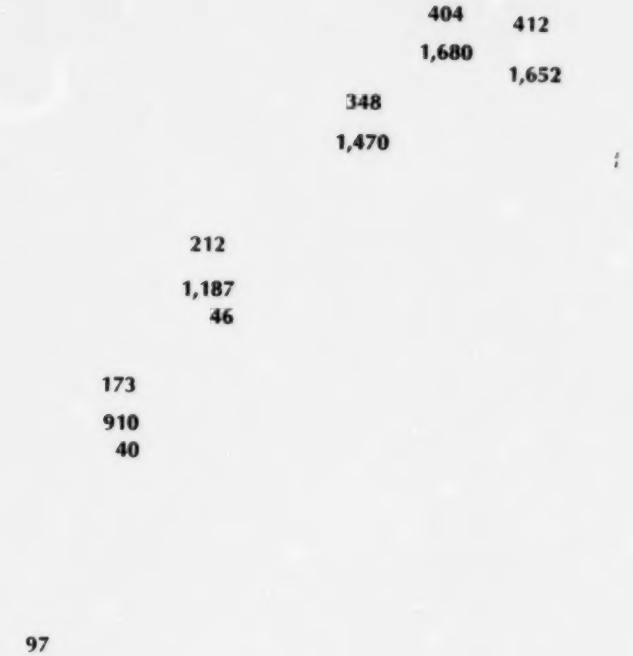
	1983	1984	1985	1986	1987	1988
Total Cash Receipts	914,875	996,094	1,031,450	1,074,812	1,080,734	1,153,392
Operating Expenses after rebates	782,222	833,629	835,016	829,443	801,416	854,689
Net Cash Income	132,653	162,465	196,434	245,369	279,318	298,703
Income in Kind	10,404	10,889	10,369	9,559	10,765	9,667
Depreciation	104,915	102,869	99,811	98,029	92,868	90,326
Realized Net Income	38,142	70,485	106,992	156,899	197,215	218,044
Inventory Change	8,916	-11,875	-34,413	-474	9,552	13,203
Total Net Income	47,058	58,610	72,579	156,425	206,767	231,247

Source: Statistics Canada, Farm Income and Prices Section

B.C. Aquaculture Production



*Includes manila clams, blue mussels, scallops, abalone and marine plants



Licensed Aquaculture Sites and Leased Hectares

SITES

HECTARES

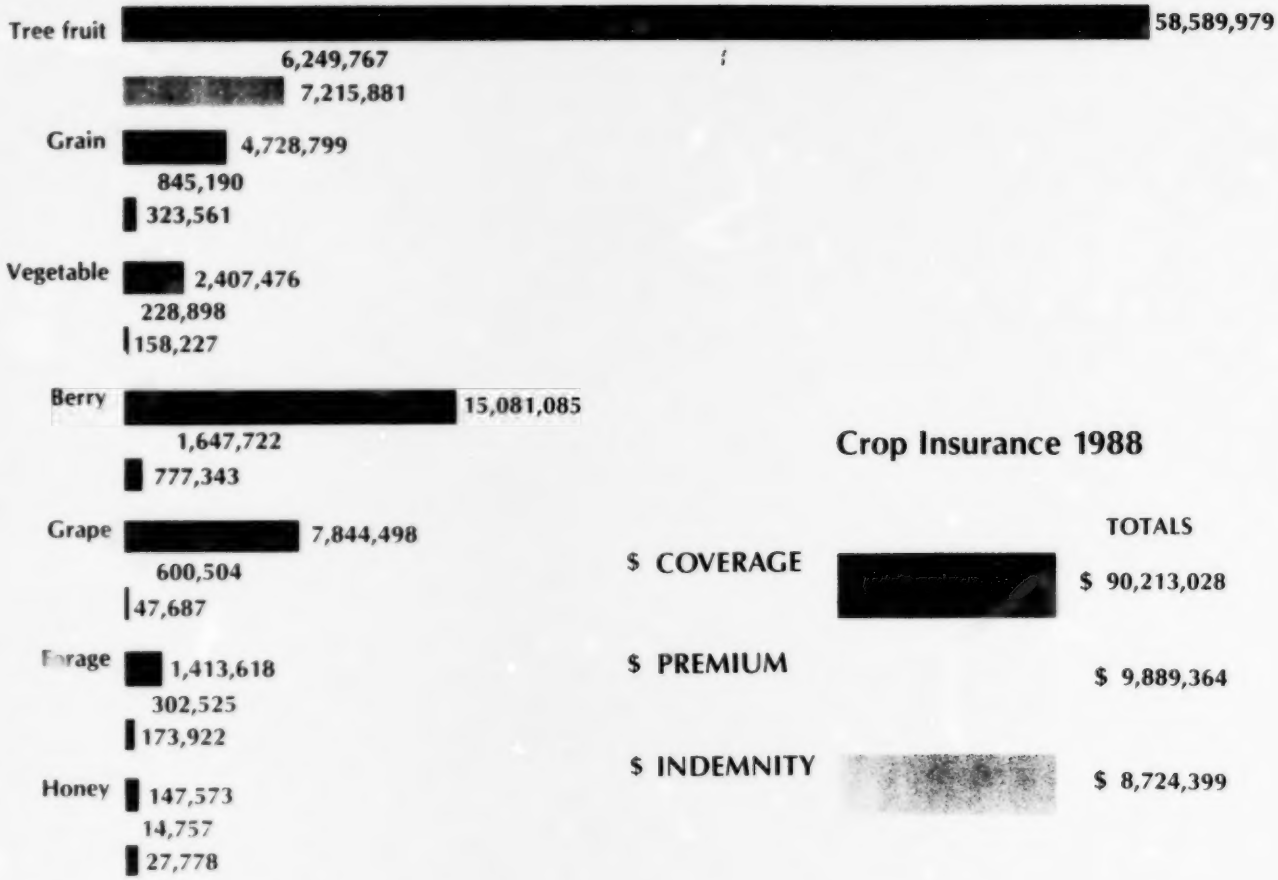
HATCHERIES

B.C. Commercial Fish Landings

	1987			1988		
	Landed Quantity (Tonnes)	Landed Value ($ mil.)	Wholesale Value ($ mil.)	Landed Quantity (Tonnes)	Landed Value ($ mil.)	Wholesale Value ($ mil.)
Salmon[1]	63,515	212	426	84,830	312	584
Herring[2]	37,809	107	174	31,601	96	176
Halibut[3]	5,444	28	38	5,866	23	30
Groundfish[4]	116,789	59	104	115,536	60	94
Shellfish[5]	23,185	35	56	23,116	41	72
Other[6]	202	1	1	334	1	1
TOTAL	246,944	442	799	261,283	533	957

Footnotes:
1. Includes salmon roe. Wholesale value includes production derived from U.S. salmon.
2. Includes herring spawn on kelp.
3. Includes landings at U.S. ports.
4. Includes hake delivered to foreign vessels in cooperative fishing arrangements and "other fish" not elsewhere included.
5. Includes shellfish aquaculture production.
6. Includes sturgeon, tuna, eulachons, smelt, anchovies, floating kelp and other fish.

Sources: B.C. Annual Fisheries Production Statistics—Ministry of Agriculture and Fisheries
Annual Summary of B.C. Catch Statistics—Canada, Department of Fisheries and Oceans

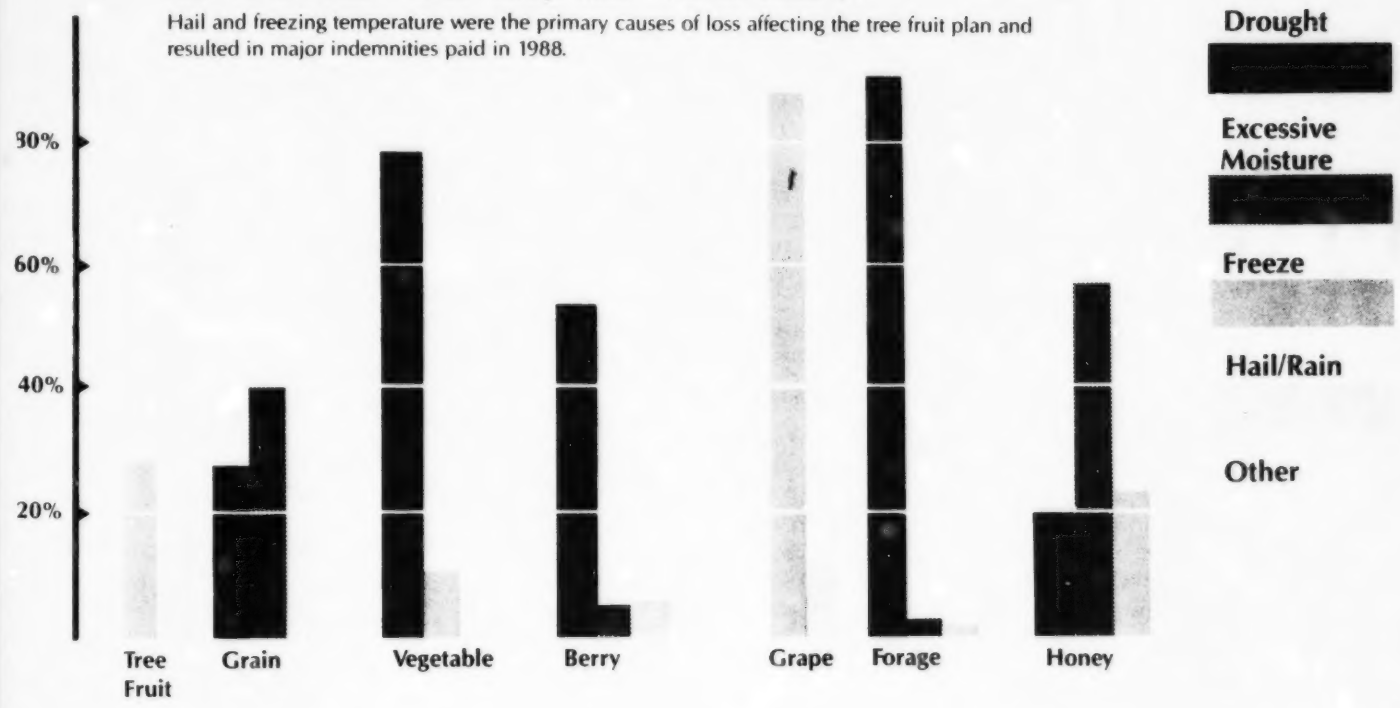


Crop Insurance 1988

	TOTALS
$ COVERAGE	$ 90,213,028
$ PREMIUM	$ 9,889,364
$ INDEMNITY	$ 8,724,399

Causes of Loss 1988 Crop Year (% of Total $)

Hail and freezing temperature were the primary causes of loss affecting the tree fruit plan and resulted in major indemnities paid in 1988.



Farm Income Insurance, March 31, 1989

SOURCE OF FUNDS

Government Premiums ($)

Blueberry	102,604
Beef	4,033,677
Greenhouse	73,258
Potatoes	107,187
Sheep	740,485
Strawberry	2,078,211
Swine	3,322,630
Tree Fruit	2,628,493
Vegetable	214,009
	$13,300,554

USE OF FUNDS

Net Indemnities to farmers: ($)

Blueberry	(102,604)
Beef	3,197,634
Greenhouse	(55,111)
Potatoes	1,446,678
Sheep	(722,672)
Strawberry	1,887,342
Swine	3,981,023
Tree Fruit	2,423,644
Vegetable	(6,621)
	12,049,313

SURPLUS $ 1,251,241

Work Done Under A.L.D.A. April 1, 1988 - March 31, 1989

Area	Cleared Acres	Amount $	Broken Acres	Amount $	Irrigation $	Drainage $	$ Orchard Renovation	Other $	Total $
Abbotsford	18	15,795	-	-	152,342	84,134	-	136,611	388,882
Chilliwack	4	5,963	-	-	50,394	8,449	-	28,551	93,357
Courtenay	-	-	-	-	-	-	-	-	-
Cranbrook	-	-	-	-	-	-	-	-	-
Creston	-	-	-	-	-	-	-	-	-
Dawson Creek	75	6,525	500	20,800	-	-	-	12,126	39,451
Duncan	-	-	15	3,675	69,922	33,611	-	48,104	155,312
Fort St. John	322	27,723	75	8,098	-	-	-	2,550	38,371
Kamloops	287	46,969	200	24,000	68,110	-	-	6,933	146,012
Oliver & Penticton	82	14,481	-	-	144,940	-	95,377	24,387	279,185
Prince George	463	32,770	415	18,600	28,313	-	-	-	79,683
Quesnel	171	46,499	111	15,475	11,690	-	-	-	73,664
Salmon Arm	17	11,200	17	1,020	-	-	-	1,303	13,523
Smithers	19	4,750	19	4,750	52,883	-	-	-	62,383
Surrey	-	-	-	-	-	-	-	-	-
Vanderhoof	200	16,000	30	6,900	41,138	-	-	30,596	94,634
Vernon	7	2,100	7	2,100	235,902	-	69,156	26,242	335,500
Williams Lake	143	29,825	133	12,306	62,049	-	-	4,080	108,260
TOTALS	1,808	260,600	1,522	117,724	917,683	126,194	164,533	321,483	1,908,217

Agricultural Land Development Assistance Program

(FISCAL YEAR)	1987/88 No	Amount	1988/89 No	Amount
Total Applications Received	165	$ 3,503,977	95	$ 1,851,990
Total Contracts Issues	213	$ 2,876,858	118	$ 1,571,696
Total Expenditures		$ 2,303,519.57		$ 1,908,217.71
Total Contracts Outstanding		$ 1,217,278.41		$ 627,439.34
		$ 3,520,797.98		$ 2,535,657.05
TOTAL Loans Payments Received		$ 3,506,479		$ 3,632,018.89
TOTAL Accounts as at March 31	2,435	$16,077,215	1,979	$15,198,532
TOTAL Number of Delinquent	216	$ 341,647	159	$ 214,697
Transferred to Taxes	22	$ 275,701	41	$ 396,043

NOTE: "Accounts Transferred to Taxes 1988/89" includes accounts transferred to the Surveyor of Taxes in April '88 for 1988 and March '89 for 1989.

Farm Product Industry Act Guarantees and Loans Outstanding

Guarantees	
Victoria Farm Meats Services Ltd.	$ 150,000
Shergar Enterprises Ltd.	1,600,000
	$1,750,000
Loans	
Ra-Bitco Farms Ltd.	110,000
	$ 110,000
TOTAL	$1,860,000

Agricultural Credit Act Guaranteed Loan Program Active Guarantees, March 31, 1989, By Region

Region	No	($000)
South Coastal	31	3,663
Southern Interior	8	755
North Central	1	4
TOTAL	40	4,422

Agricultural Credit Act Guaranteed Loan Program Active Guarantees, March 31, 1989, By Enterprise

Enterprise	No	($000)
Dairy	9	1,209
Beef	3	184
Grain & Forage	0	0
Poultry	1	100
Vegetables	9	1,047
Orchards/Vineyards	2	299
Mixed	1	11
Swine	5	369
Sundry	9	1,176
Aquaculture	1	27
TOTAL	40	4,422

ARDSA Approved Projects to March 31, 1989

Commodity	Number Projects	Project Cost ($)	ARDSA Contribution ($)	Federal Delivery Funding ($)	Provincial Delivery Funding ($)
Livestock					
- Beef	5	7,859,376	2,674,637		
- Dairy	1	34,320	19,570		
- Swine	5	416,418	345,418		
Poultry	2	196,250	93,800		
Honey/Bees	4	360,215	231,025		100,000
Tree Fruits	11	7,272,912	2,280,537	57,600	
Soft Fruits	11	12,260,631	2,304,584		
Greenhouse Vegetables	4	1,726,214	422,371		
Field Vegetables	11	6,140,003	1,433,250	219,000	
Mushrooms/Nuts	3	471,670	122,335		
Forages	15	450,961	178,117		
Cereals, Seeds & Oilseeds	8	5,721,515	2,771,573		
Irrigate/Drain/Mixed	79	19,259,119	12,941,648	22,400	
General	19	4,652,696	3,703,110	460,809	
Total ARDSA Program	178	66,822,300	29,521,975	759,809	100,000

Canada-British Columbia Grape and Wine Adjustment Assistance Initiative ($000)

Program Component	Federal Funds	Prov. Funds	Total
Deficiency Payment	2.4	2.1	4.5
Vine Removal	10.5	9.3	19.8
Cash Cost Escalation	.6	.6	1.2
Marketing	.5	.5	1.0
Provincial Credit	0	1.5	1.5
TOTAL	14.0	14.0	28.0

1988-89 Fiscal Expenditures Canada-British Columbia Grape and Wine Adjustment Assistance Program

Component	($) Expenditures
Vine Removal	0
Deficiency Payment	2,362,160
Cash Cost Escalator	61,503
Market Development	0
TOTAL	2,423,663

ARDSA Summary 1985 - 1989

	Applications Received	Applications Ineligible	Rejected or Withdrawn	Projects Approved
Program 1 - Productivity Enhancement	230	40	100	72
Program 2 - Resource Development	190	20	63	54
Program 3 - Commodity Development	151	41	60	33
1985 - 1988/89 Agreement Total	579	101	223	159

Revenues

	1988/89 ACTUAL ($000)
SALES AND SERVICE FEES	
FARM INCOME INSURANCE	
Farm Income Insurance – Govt. Share	$13,300.6
Farm Income Insurance – Producer Premium	13,300.6
TOTAL	26,601.2
LICENCES AND PERMITS	
AGRICULTURAL LICENCES:	
Miscellaneous:	4.7
Horned Cattle Purchases	29.5
Brand Certificates	79.9
Brand Inspection Certificates	262.2
Stock Dealer's Licences	6.6
Slaughterhouse Licences	1.7
Hide Dealer's Licences	1.8
Miscellaneous Brand Revenue	.7
Dairy Industry Services Licences	167.3
Livestock: AI Centre Licences	1.5
Livestock: Record of Performance fees	5.2
Fur Farm Licences	1.8
Public Sale Yard Licences	1.0
Vet Drug Licences	4.6
Vet Lab Fees	162.0
Poultry Licences and Fees	2.1
Milk Board Recoveries	11.0
TOTAL	743.6
FISHERIES LICENCES:	
Buying, Inspection Stations, Processing Plants, Cold Storage Facilities, Fisherman Vending	198.2
MISCELLANEOUS LICENCES AND PERMITS:	
Livestock Protection Act – Dog Licences	10.8
TOTAL	952.7

INTEREST FROM INVESTMENTS	
Gain/Loss on Conversion of Foreign Exchange	18.3
Farm Income Insurance Fund (Interest)	2.0
Interest on Overdue Accounts	57.0
ALDA – Interest on Loans	1,234.3
TOTAL	1,311.6
MISCELLANEOUS REVENUE	
OTHER MISCELLANEOUS REVENUE	
Miscellaneous Receipts	5.2
ARDA Surcharge Recovery (Loans Returned on Land Out of the ALR)	11.7
Recovery – Current and Prior Years' Expenditures	1,456.7
TOTAL	1,473.6
CONTRIBUTIONS FROM THE FEDERAL GOVERNMENT	
ERDA Recoveries	3,434.7
4-H Clubs	16.5
Farm Labour Service	5.9
Grape & Wine Producer Assistance	6,900.0
TOTAL	10,357.1
EXTERNAL VOTE RECOVERIES	
MINISTRY OPERATIONS	
VOTE 10 Fisheries & Financial Programs – Crop Insurance	4,999.5
TRUST ACCOUNT – Dairy Producers' Protection Fund	49.4
MINISTRY TOTAL	$45,745.0

Expenditures

MINISTER'S OFFICE	$ 227,944
MINISTRY OPERATIONS	$68,603,894
ADMINISTRATION & SUPPORT SERVICES	
Deputy Minister	243,925
Deputy Minister – Special Projects	164,260
Regulatory Marketing	197,755
Export Market Development	(7,180)
Food Exhibitions	291,627
Marketing Branch – Administration	816,133
B.C. Food Processing	0
Dairy Laboratory	542,951
Field Brand Inspection	594,544
Dairy Industry Services	347,277
Grants to Fairs & Societies	263,830
Grants to Research Programs	150,000
ADM – Policy & Administration	179,218
Personnel Services	450,523
Policy Development	244,726
Policy Analysis & Coordination	247,203
Statistics & Quantitative Analysis	113,283
Reindeer Project	41,518
Farm Management Branch	482,033
Information Services	740,591
Ministry Comptroller's Office	43,736
Accounting Operations	492,010
Financial Planning	102,675
Facilities Services	1,597,580
Administrative & General Office Serv.	80,060
Audit Services	211,341
System Services	1,063,540
	$ 9,695,156
AGRIC. MARKET & FOOD INDUSTRY DEVELOPMENT	
Food Industry Development Program	665,013
	665,013
AQUACULTURE & COMMERCIAL FISHERIES	
Administration	323,965
Aquaculture Industry Development	1,541,723
Aquaculture Operations	662,673
Commercial Fisheries	341,245
	2,869,607
DEVELOPMENT & EXTENSION	
ADM – Administration	159,929
Special Projects	67,399
Livestock – Administration	325,636
Livestock – Regulatory Division	6,603
South Coastal Region	1,595,965

D.H.I.D.	366,413
Southern Interior Region	1,646,876
Central	657,451
Peace	469,082
Farm Management Branch	0
Engineering	768,301
Soils	606,635
Special Services	62,939
Crop Protection – Administration	1,100,271
Apiculture	232,054
Weed Control & Range Program	32,640
Plant Health	805,711
Animal Health Branch	213,574
Animal Health Centre	1,178,940
Rural Organizations – Administration	404,073
Rural Org. – 4H Fed./Prov. Agreement	48,649
Employment Development Fed./Prov. Agreement	680
D.A.T.E. Program	126,385
	10,876,208
FINANCIAL ASSISTANCE	
ADM – Administration	125,058
Special Projects	45,067
Agricultural Finance – Administration	614,509
Agriculture – Loans Guarantees	254,791
Grower Loans Subsidy	418,965
Livestock Drought Assistance Program	950,000
Feed Grain Mrkt. Dev. Program – 87 Crop	2,447,225
Feed Grain Mrkt. Dev. Program – 88 Crop	1,029,790
Feed Grain – Transportation Off-set	21,036
Farm Income Insurance – Administration	660,199
Farm Income Insurance – Program	13,300,554
Farm Income Insurance – Red Delicious Asst.	3,332,366
Special Hog Payment Program	251,688
Crop Insurance – Administration	249,955
Crop Insurance – Fraser Valley	186,957
Crop Insurance – Okanagan Valley	526,789
Crop Insurance – Peace River	305,601
Crop Insurance – Central	74, 213
Crop Insurance – Program	0
A.R.D.A.	818,434
Grape & Wine Adjustment Assist. Program	13,900,000
Farm Land Resources - Administration	236,882
Tripartite Administration	81,795
Tripartite Agreements, Apples	2,015,735
Beef Feedlot/Packers Recovery Program	2,650,304
	44,497,910
FROZEN FUNDS	
Financial Assistance	0
MILK BOARD	$ 326,962
PROVINCIAL AGRICULTURAL LAND COMMISSION	$ 1,102,654
AGRI—FOOD REG. DEV. SUB. AGMT. (ERDA)	$ 6,795,291
GAME FARMING – ENVIRONMENT	$ 91,500

Related Agencies, Boards and Commissions

Agricultural Land Commission
British Columbia Milk Board
British Columbia Marketing Board
British Columbia Broiler Hatching Egg Commission
British Columbia Chicken Marketing Board
British Columbia Cranberry Marketing Board
British Columbia Egg Marketing Board
British Columbia Grape Marketing Board
British Columbia Hog Marketing Commission
B.C. Mushroom Marketing Commission
British Columbia Oyster Board
British Columbia Tree Fruit Marketing Board
British Columbia Turkey Marketing Board
British Columbia Vegetable Marketing Commission
British Columbia Sheep and Wool Commission

Legislation Administered by the Ministry of Agriculture and Fisheries

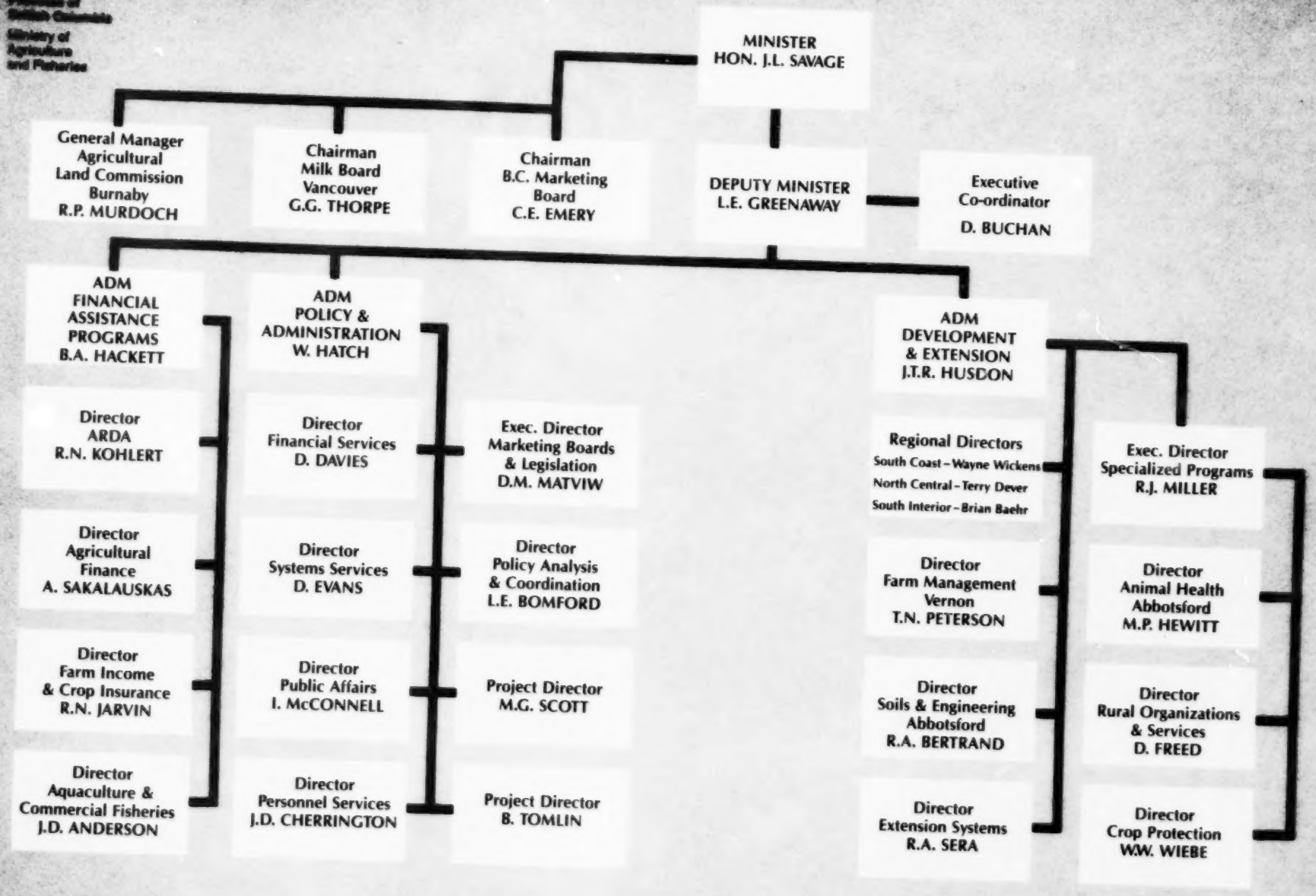
Agriculture and Rural Development (B.C.) Act
Agriculture Credit Act
Agricultural Land Commission Act
Agricultural Produce Grading Act
Agrologists Act
Animal Disease Control Act
Bee Act
Cattle Horn Act
Farm Distress Assistance Act
Farm Income Insurance Act
Farm Product Industry Act
Farmers and Women's Institutes Act
Fish Inspection Act
Fisheries Act
Fur Farm Act
Grasshopper Control Act
Insurance for Crops Act
Livestock Act
Livestock Brand Act
Livestock Industry Act
Livestock Lien Act
Livestock Protection Act
Livestock Public Sale Act
Margarine Act
Milk Industry Act
Ministry of Agriculture and Food Act
Natural Products Marketing Act
Pharmacists Act (sections 49-55)
Plant Protection Act
Prevention of Cruelty to Animals Act
Seed Grower Act
Seed Potato Act
Soil Conservation Act
Veterinarians Act
Veterinary Laboratory Act
Weed Control Act

Offices

Office	Address	Telephone	Fax #
Minister's Office	Legislative Buildings, Victoria, B.C. V8V 1X4	387-1978	356-2290
Abbotsford	205 - 33780 Laurel Street V2S 1X4	852-5211	852-5428
	Engineering, 33832 South Fraser Way V2S 2C5	852-5363	853-4383
	Agriculture & Food Centre, 32916 Marshall Road V2S 1K2	852-5350	852-5394
	Animal Health Centre, Box 100 V2S 4N8	854-4400	853-4357
Chilliwack	45850 #F Yale Road V2P 2N9	795-8395	795-8454
Cloverdale	17720 - 57th Avenue, Surrey V3S 4P9	576-2911	576-8717
Courtenay	209 - 420 Cumberland Road V9N 5M6	334-1239	334-1209
Cranbrook	42 - 8th Avenue South V1C 2K3	426-1535	426-1546
Creston	456 Northwest Boulevard, Box 1980 V0B 1G0	428-3255	428-3271
Dawson Creek	1201 - 103rd Avenue V1G 4J2	784-2225	784-2299
Duncan	238 Government Street V9L 1A5	746-1210	746-1401
Fort St. John	201 - 9711 100th Avenue V1J 1Y2	787-3240	787-3299
Kamloops	162 Oriole Road V2C 4N7	828-4552	828-4631
Kelowna	1873 Spall Road V1Y 4R2	861-7211	861-7430
Oliver	Court House, Box 940 V0H 1T0	498-6235	498-6333
Penticton	3547 Skaha Lake Road V2A 7K2	492-1320	492-1309
Prince George	Experimental Farm Site R.R. #8 RMD 7 V2N 4M6	565-6466	565-6675
Quesnel	208 - 350 Barlow Avenue V2J 2C1	992-4241	992-4314
Salmon Arm	Samara Building, Bag 100 V1E 4S4	832-1630	832-1707
Sidney	Bldg. 20, Saanichton Research Station 8801 East Saanich Road V8L 1H3	656-0941	656-8922
Smithers	Government Building Bag 5000 V0J 2N0	847-7246	847-7232
Vanderhoof	Church Avenue, Box 987 V0J 4K7	567-2111	567-6303
Vernon	4607 - 23rd Street V1T 4K7	549-5580	549-5488
Victoria	808 Douglas Street V8W 2Z7	387-5121	387-5130
Williams Lake	540 Borland Street V2G 1R8	398-4500	398-4688

Organization Chart

Province of British Columbia
Ministry of Agriculture and Fisheries



All Positions in Victoria Unless Noted Otherwise